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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/554,269	06/29/2000	MANFRED BRAUNER	TPP-30873	2242

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EXAMINER

EGAN, BRIAN P

ART UNIT	PAPER NUMBER
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1772

DATE MAILED: 01/29/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/554,269

Applicant(s)

BRAUNER, MANFRED

Examiner

Brian P. Egan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 November 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☒ Claim(s) 16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claim 16 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Pursuant to the newly amended Claim 1, the Applicant has provided Claim 1 with the limitation that the element be manufactured through injection molding. Claim 16 claims the same limitation. Proper clarification and/or correction are required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, for failing to particularly point out and distinctly claim the subject matter which the Applicant regards as his invention. It is unclear whether the "circumambient frame" in line 2 of the claim is the same frame as claimed in line 3 of the claim, i.e., "constituted by a frame." If the frame in line 3 is the same as that in line 2, the Examiner suggests replacing, "constituted by a frame," with, "constituted by the circumambient frame." If the aforementioned replacement is made, the Examiner further suggests replacing the phrase, "the frame," used in lines 4-6 with, "the circumambient frame." Proper clarification and/or correction are required.

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4. Claims 1, 4, 8-9, and 16 are rejected under 35 U.S.C. 112, second paragraph, for failing to particularly point out and distinctly claim the subject matter which the applicant regards as his invention. The Examiner maintains that the aforementioned claims all present method limitations and/or functional limitations that are given little to no patentable weight in article claims. Claim 1 recites the limitations, “which element is manufactured through injection molding of a thermoplastic polymeric material,” and, “the resilient section being a part of the wall section, wherein differences in the temperature related shrinkage between the frame and the wall section are absorbed by the resilient section whereby the resilient section prevents warping of the element,” Claims 4 and 8-9 recite the limitations, “hollow profile formed through injection of a pressurized fluid into a still molten thermoplastic material,” and, “whereby a barrier is formed in this connection part at the solidification of the thermoplastic material, which barrier prevents the pressurized fluid from entering the wall section during the manufacturing process,” and Claim 16 recites, “wherein the molding is injection molding.” The Examiner suggests either eliminating these aforementioned method and functional limitations or modifying the claims according to a means-plus function (MPEP sections 2181-2184) such that the functional limitations can be given patentable weight. Proper clarification and/or correction are required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brauner (WO 97/39954) in view of Rehrig (#3,565,278), Umiker (#5,395,010), and Boucher-Giles (WO 97/16353).

Brauner teaches a flat or semi-flat element to be used in a collapsible container (See Abstract and Figs. 1-5) including a partly or completely circumambient frame (Page 2, lines 2-5) and an intermediate wall section (Fig. 1, #1), which element is manufactured through molding of a polymeric material (Page 1, lines 27-28), whereby the frame is used as a carrying structure (Page 2, lines 19-21). The frame contains a closed hollow profile (Page 2, lines 2-5) and the frame is connected to the wall at its corner (Figs. 3-4, #7 (Frame) connected to #1 (Wall Section)), thereby being attached at a symmetrical point whereby a gravity center line runs through the connection point and the opposite corner. The closed hollow profile of the frame is formed by injection molding (Page 1, lines 27-28). The thermoplastic material is allowed to solidify closest to the inner wall of the mold so that a barrier is formed before injecting a pressurized fluid to create the hollow profile (Page 2, lines 2-14). (Even though Brauner teaches the method of forming the hollow profile as claimed by the applicant, note that the method of forming the device is not germane to the issue of patentability of the device itself. Therefore, this limitation in the applicant's claim has been given little patentable weight.)

Brauner fails to teach the use of a resilient section to combat temperature related shrinkage of the injection molded parts. Brauner also fails to teach U-shaped and ribbed frame embodiments, and also fails to teach the wall section being thinner at the side closest to the frame section than the average thickness of the wall section.

Rehrig teaches the use of a resilient section (“corrugations”) in injection molded containers (see Abstract). Rehrig teaches the use of the resilient section for the purpose of providing a flexible, slightly resilient, springlike section to accommodate longitudinal expansion and shrinkage in the panel, as well as limited lateral deflection of the panel – thereby increasing the life of the crate (Col. 2, lines 6-18). It would have been obvious through routine experimentation to one of ordinary skill in the art at the time Applicant’s invention was made to have provided a collapsible container with a resilient section between parts exhibiting differential temperature related shrinkage for the purpose of providing a flexible, slightly resilient, springlike section to accommodate longitudinal expansion and shrinkage in the panel, as well as limited lateral deflection of the panel – thereby increasing the life of the crate as taught by Rehrig.

Therefore, it would have been obvious to one of ordinary skill in the art at the time Applicant’s invention was made to have modified Brauner to include a resilient section between parts exhibiting differential temperature related shrinkage, i.e., between the frame and wall section, as taught by Rehrig in order to provide a flexible, slightly resilient, springlike section to accommodate longitudinal expansion and shrinkage in the panel, as well as limited lateral deflection of the panel – thereby increasing the life of the crate.

Umiker teaches that it is notoriously well known to provide frame structures of plastic containers with multiple embodiments, including the conventional embodiments which include U-shaped and ribbed profiles (see Fig. 2), as well as embodiments slightly more structurally sound which include closed hollow profiles (see Fig. 3). Although Umiker fails to teach a rib structure wherein the ribs are spaced at a distance from each other smaller than the height of

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each of the plurality of ribs, it would have been an obvious matter of design choice to change the size of each rib and distance between each rib, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955).

Umiker teaches the notoriously well known embodiments for the purpose of demonstrating the multiple forms of handle portions that are available for plastic container structures. It would have been obvious through routine experimentation to one of ordinary skill in the art at the time Applicant's invention was made to have modified the handle structure of the frame depending on the desired end product such that it is either U-shaped, ribbed, or in a hollow profile form as taught by Umiker.

Therefore, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to have modified Brauner by interchanging the frame structure with U-shaped, ribbed, and hollow profiles as taught by Umiker in order to create a desirable handle portion for the desired end product.

Boucher-Giles teaches a plastic-molded collapsible container whereby the wall sections are reduced in thickness by tapering the wall towards the base creating a pivot line. Boucher-Giles teaches the reduced-thickness wall sections for the purpose of allowing proper folding of the collapsible container (Page 4, lines 9-19). It would have been obvious through routine experimentation to one of ordinary skill in the art at the time Applicant's invention was made to have modified a collapsible container by tapering its wall thickness for the purpose of allowing proper folding of the collapsible container as taught by Boucher-Giles.

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Therefore, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to have modified Brauner to include a tapered wall portion such that the wall thickness on the side of the wall section is thinner than the average thickness of the wall portion as taught by Boucher-Giles in order to allow proper folding of the collapsible container.

7. Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Knox (#2,888,764) in view of Painsith (#6,216,377), Rehrig (#3,565,278), and King (#2,189,521).

Knox teaches an element that can be either flat or semi-flat (Col. 1, lines 15-30) including a circumambient (see Fig. 1) molded polymeric frame (Col. 2, lines 41-42; Col. 5, lines 65-66) (the element comprising four wall sections that form the circumambient frame such that each wall section has a partially circumambient frame (see Figs. 1-2)), an inner wall section (Fig. 1, #13), and a resilient section (Fig. 1, #4) that connects the frame to the inner wall section. The frame forms a U-shape profile (Fig. 5, #54) (a U-shape inherently comprises a plurality (2) of ribs). Although Knox teaches a frame comprising a plurality of ribs, it is not explicitly stated whether the ribs are spaced at a distance from each other smaller than the height of the height of each of the plurality of ribs. It would have been an obvious matter of design choice, however, to change the size of each rib and distance between each rib, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105 USPQ 237 (CCPA 1955). The wall section is connected to the frame at the gravity center line of the frame (see Fig. 2, #5). The element disclosed by Knox is a picture frame and therefore considered a container for pictures. Not only is the resilient section considered a "deformable section" made of polyethylene plastic

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(Col. 2, lines 54-56), the resilient section provides enough flexibility to the structure such that the inner wall section is moved both toward and away from the frame, depending on the desired end product (Col. 1, lines 21-30). Thus, the resilient section provides a pivot line at its connection points with both the inner wall and frame (Col. 1, lines 21-30; see also Figs. 2 and 3(a-b)). Furthermore, although not explicitly stated, the frame structure inherently provides a carrying structure.

Despite the Applicant's contentions that Knox fails to teach an injection molded structure, the mere disclosure of "molding members" (Col. 2, lines 40-50) includes all molding methods – again note, however, that the method of forming is not germane to the article itself and therefore given little patentable weight. Further note that it is notoriously well known in the art that molded picture frames are injection molded as evidenced by Painsith (see Col. 3, line 66 to Col. 4, line 4).

Knox fails to explicitly state whether the differences in temperature related shrinkage between the frame and the wall section are absorbed by the resilient section without any relative movement between the wall section and the frame whereby warping of the element is avoided. Knox also fails to teach the inner wall structure being thinner at the pivot line than the average thickness of the inner wall structure. Given that the inner wall structure taught by Knox is a frame, however, it is an obvious matter of design choice whether the frame is tapered. As detailed in Figs. 3(a-b), #2, the inner frame taught by Knox is tapered, just not tapered such that the frame is at its narrowest point at the connection between the resilient section and the inner frame. It is notoriously well known in the art that picture frames may be tapered such that the wall gets thinner as it extends away from the picture as evidenced by King (see Figs. 1-2 and 8-

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10). Therefore, it would have been an obvious matter of design choice to choose a frame such that the tapered portion is thinnest at the point of intersection with the resilient section depending on the desired aesthetic appearance of the end product.

Finally, Rehrig teaches the use of a resilient section ("corrugations") in injection molded containers (see Abstract). Rehrig teaches the use of the resilient section for the purpose of providing a flexible, slightly resilient, springlike section to accommodate longitudinal expansion and shrinkage in the panel, as well as limited lateral deflection of the panel – thereby increasing the life of the container (Col. 2, lines 6-18). It would have been obvious through routine experimentation to one of ordinary skill in the art at the time Applicant's invention was made to have provided a collapsible frame with a resilient section between parts exhibiting differential temperature related shrinkage for the purpose of providing a flexible, slightly resilient, springlike section to accommodate longitudinal expansion and shrinkage in the panel, as well as limited lateral deflection of the panel – thereby increasing the life of the container as taught by Rehrig.

Therefore, it would have been obvious to one of ordinary skill in the art at the time Applicant's invention was made to have modified Knox's resilient section such that it is formed to absorb the temperature related differences in the molded structures as taught by Rehrig in order to provide a flexible, slightly resilient, springlike section to accommodate longitudinal expansion and shrinkage in the frame and wall sections, as well as limited lateral deflection of the frame – thereby increasing the life of the frame.

Response to Remarks

8. Applicant's arguments with respect to claims 1-21 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian P. Egan whose telephone number is 703-305-3144. The examiner can normally be reached on M-F, 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Y. Pyon can be reached on 703-308-4251. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

BPE
January 21, 2003



HAROLD PYON
SUPERVISORY PATENT EXAMINER

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1/21/03